the model is robust to a wide range of parameter estimates. **CONCLUSIONS:** This analysis suggests that the use of ATV+RTV in the Mexican healthcare setting is a preferred option when compared to LPV+RTV for treatment of treatment-naïve HIV patients.

PIN24

COST-EFFECTIVENESS OF RESPIRATORY SYNCYTIAL VIRUS PROPHYLAXIS WITH PALIVIZUMAB AMONG PRETERM INFANTS COVERED BY MEDICAID IN THE UNITED STATES

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OBJECTIVES: To examine the incremental cost-effectiveness of palivizumab vs. no prophylaxis among 3 groups of preterm infants in a Medicaid population. Infants were ≤6 months of age at the start of the RSV season: 1) ≤32 weeks gestational age (wGA); 2) High-risk (HR) 32–35 wGA (≥ 2 risk factors) or 3) Low-risk (LR) 32–35 wGA (≤1 risk factor). **METHODS:** We conducted a cost-utility analysis of palivizumab from a societal perspective based on 5 monthly doses throughout the RSV season. Medicaid-related inputs included the background rates of RSV disease, marginal healthcare costs within the first two years of life between infants with RSV compared to controls, and the estimated public payer dollars spent for palivizumab. The base case included recurrent wheezing (RW), which was excluded during sensitivity analysis. We report the incremental cost-effectiveness ratio (ICER), morbidity, and mortality between the prophylaxed and non-prophylaxed groups. **RESULTS:** Prophylaxis among <32 wGA infants was dominant, with and without RW. For HR 32-35 wGA infants, the ICER was $3,791/QALY with RW and $26,290/QALY without RW. For LR 32-35 wGA infants, the ICER was $22,690/QALY with RW and $231,784/QALY without RW. Compared with infants without prophylaxis, infants receiving prophylaxis were projected to have fewer RSV hospitalizations (-4214 among <32 wGA, −4734 among HR 32-35 wGA, and −1289 among LR 32-35 wGA infants) among the estimated 119,500 premature births in Medicaid in the US. Likewise, prophylaxis was estimated to reduce the number of deaths by 42 among <32 wGA, 74 among HR 32-35wGA and 20 among LR 32-35 wGA infants. **CONCLUSIONS:** Palivizumab was shown to be highly cost-effective among infants <32 wGA and HR 32-35 wGA due to Medicaid's lower cost structure for healthcare items and services and higher rates of disease compared to private plans. The study was sponsored by MedImmune, LLC.

PIN25

COST-EFFECTIVENESS ANALYSIS OF THE INTRODUCTION OF THE VARICELLA VACCINE IN COLOMBIA

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OBJECTIVES: To perform a cost-effectiveness analysis of the introduction of the varicella vaccine in the National Immunization Program of Colombia. **METHODS:** A decision analysis model was built to follow two cohorts from birth. One cohort had vaccination, and the other did not. The time horizon was 30 years. The perspective was from the third payer. A micro-costing assessment of varicella in Colombia was undertaken. All costs were expressed in 2008 dollars of December 31. Incremental cost-effectiveness ratio (ICER) was the main outcome measure. A discount rate for health benefits and costs of 3% was used. A sensitivity analysis was made to assess assumptions uncertainty. **RESULTS:** Vaccination would avoid 9,415,444 consultations, 17,576 hospitalizations, and 1,144 varicella deaths. Cost per Life-Year Gained (LYG) was US$2,527/LYG. From the third payer perspective in Colombia, varicella costs without vaccination would be US$88 millions, and with vaccination US$35 million. The sensitivity analysis shows that the vaccination strategy is not cost-effective if vaccination cost per dose is higher than US$15.6. In the case of a booster dose every ten years, the vaccination would not be cost-effective if vaccination cost per dose is higher than US$9.8. **CONCLUSIONS:** Varicella vaccination is highly cost-effective according to World Health Organization criteria (less than per capita gross domestic product). The authors recommend, weighting the budget impact, the implementation of the varicella vaccine in Colombia.

PIN26

A COST-EFFECTIVENESS ANALYSIS ON THE USE OF DAPTOMYCIN FOR THE TREATMENT OF BACTEREMIA AND INFECTIVE ENDOCARDITIS IN PATIENTS WITH METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS INFECTION IN MEXICO

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OBJECTIVES: The recent increase of methicillin-resistant S. aureus (MRSA) as the leading cause of bacteremia, and subsequent infective endocarditis, has led clinicians to resort to alternative treatments, rather than the traditional penicillin-based treatment strategy. Such alternatives include daptomycin, which has proven to be efficacious. An economic evaluation was performed to determine the most cost-effective alternative between daptomycin and vancomycin for the treatment of patients with MRSA bacteremia and infective endocarditis. **METHODS:** A cost-effectiveness analysis was performed from an institutional perspective (Mexican Institute of Social Security, IMSS). Vancomycin is currently the treatment of choice for infective endocarditis within the treatment guidelines; daptomycin is regarded as an alternative treatment. Effectiveness and safety data was taken from published literature; effectiveness parameters included clinical and bacteriological cure, and safety parameters included drug-related adverse events. Resource use data was obtained from the institution; total direct costs of hospitalization and treatment were considered. The source of the unit costs was the institution, current for 2010. All costs are expressed in local currency (Mexican Pesos, MXP). The time horizon was less than 1 year; no discount rate was used. A decision tree was built with three possible outcomes considered: success or failure to treatment, and death. A probabilistic sensitivity analysis was performed through a Monte Carlo simulation with 100,000 iterations to confirm the robustness of the model. **RESULTS:** The results show a cost/effectiveness ratio of $371,813.80 MXP for daptomycin compared to $466,229.23 MXP for vancomycin, making daptomycin a more cost-effective alternative (dominant) for the treatment of bacteremia and infective endocarditis. **CONCLUSIONS:** From an institutional perspective in Mexico, daptomycin is a more cost-effective (dominant) alternative than vancomycin for the treatment of bacteremia and infective endocarditis in patients with MRSA infection.

PIN27

COST-EFFECTIVENESS ANALYSIS OF THE INTRODUCTION OF ACELLULAR PERTUSSIS IN COLOMBIAN ADOLESCENTS

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OBJECTIVES: The loss of vaccine-induced immunity to pertussis over ten years after administered increment the burden of pertussis-related disease. To diminish the burden of pertussis-related disease on children under-5 years we propose a cost-effectiveness analysis of the introduction of pertussis vaccine in Colombian adolescents. **METHODS:** Two cohorts (with vaccinated and unvaccinated adolescents) of children were followed from birth to 5 years (both vaccinated with current scheme: 2-4-6-18 months and 5 years with DTwP). A decision model was used to estimate the burden of pertussis-related disease. The cost of pertussis was taken from a previous study. A government perspective was used. Vaccine administration cost plus vaccine price were assumed between US$5-US$12 per dose. Adolescent vaccination coverage was assumed to be 70%. A deterministic sensitivity analysis was performed. Costs were US dollars from 2008. **RESULTS:** Without adolescents vaccination, the current scheme reduce 93% pertussis cases (from 102,196 to 6,912), 83% deaths (from 408 to 55), and 93% DALYs (18,189 to 1,233). With adolescent vaccination, cases would reduce from 6,912 to 4,838, deaths from 408 to 39, and DALYs from 1,233 to 860, in the current scenario. Total pertussis costs without adolescent vaccination is US$737,186, and with vaccination US$516,030. Incremental Cost-Effectiveness Ratio with a vaccination coverage of 70% would go from 4,188 (vaccination cost per dose: US$5) to 10,331 (vaccination cost per dose: US$12). **CONCLUSIONS:** This is the first study in a developing country that assesses pertussis vaccination in adolescent. Pertussis adolescent vaccination was cost-effective in Colombia, according to World Health Organization criteria (less than three times the per-capita Gross Domestic Product). The investigators recommend adolescents pertussis vaccination in Colombia.

PIN28

ESTIMATED HEALTH AND ECONOMIC IMPACT OF QUADRIVALENT HPV TYPES 6, 11, 16, 18 VACCINE IN BRAZIL USING A TRANSMISSION DYNAMIC MODEL

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OBJECTIVES: The quadrivalent (6,11,16,18) HPV vaccine has been approved in Brazil for prevention of cervical cancer, vulvar/vaginal pre-cancers, and genital warts in women age 9 to 26 years. We assessed the health and economic impact of the quadrivalent (6,11,16,18) HPV vaccine from the healthcare system perspective in Brazil. **METHODS:** A published mathematical model of the transmission dynamics of HPV infection and disease was adapted for Brazil. Model inputs were used from Brazil or the Latin/America region when available; otherwise, the default values in the original model were used. Maintaining current cervical cancer screening practices in Brazil, we evaluated two strategies: routine vaccination of females by age 12 (S1), and S1 combined with a temporary (5 years) female catch-up program for age 12–24 years (S2). The vaccine coverage rates were 85% for the routine and 50% for the catch-up vaccination programs. **RESULTS:** The most effective strategy was S2. Comparing S2 to no vaccination, we estimated the cumulative percent reduction in incident HPV 6/11/16/18-related genital warts-female, genital warts-male, cervical intraepithelial neoplasia (CIN) grade 1, CIN 2/3, and cervical cancer cases would be 81%, 57%, 70%, 72%, and 59%, respectively over 100 years. The cost-effectiveness ratios were Brazil Reals 1,203 (US$ 699) per quality-adjusted life years (QALY) gained for S1 compared with no vaccination, and Brazil Reals 1,522 (US$ 885) per QALY gained for S2 compared with S1. **CONCLUSIONS:** In Brazil, vaccination of females age 12–24 years with a quadrivalent (6,11,16,18) HPV vaccine can reduce the incidence of cervical cancer, CIN, and genital warts at a cost per QALY ratio within the range typically regarded by the World Health Organization as cost-effective.

PIN29

A COST-EFFECTIVENESS ANALYSIS ON THE USE OF DAPTOMYCIN FOR THE TREATMENT OF SKIN AND SOFT TISSUE INFECTIONS WITH FAILURE TO VANCOMYCIN THERAPY IN MEXICO

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OBJECTIVES: The incidence of skin and soft tissue infections (SSTI) has augmented recently in Mexico, mainly due to increases in vancomycin-resistant pathogens and immunocompromised patients. New antibiotics, such as daptomycin, have

proved to be efficacious in the management of SSTI. An economic evaluation was performed to determine the most cost-effective alternative between daptomycin and linezolid for the treatment of SSTI with failure to vancomycin therapy. **METHODS:** A cost-effectiveness analysis was performed from an institutional perspective (Mexican Institute of Social Security, IMSS). Both drugs are included within the treatment guidelines as secondary therapy for SSTI following vancomycin failure. As required per guidelines, use of concomitant therapy with ciprofloxacin and metronidazole was also considered. Effectiveness and safety data was taken from published literature; effectiveness parameters included clinical and microbiological cure, and safety parameters included drug-related adverse events. Resource use data was obtained from the institution; total direct costs of hospitalization and treatment were considered. The source of the unit costs was the institution, current for 2010. All costs are expressed in local currency (Mexican Pesos, MXP). The time horizon was less than 1 year; no discount rate was used. A decision tree was built, considering two possible outcomes: success and failure to treatment. A probabilistic sensitivity analysis was performed through a Monte Carlo simulation with 100,000 iterations to confirm the robustness of the model. **RESULTS:** The results show a cost/effectiveness ratio of $52,135.67 MXP for daptomycin compared to $67,623.14 MXP for linezolid, making daptomycin a more cost-effective alternative (dominant) for the treatment of SSTI. The sensitivity analysis confirmed the robustness of the model. **CONCLUSIONS:** From an institutional perspective in Mexico, daptomycin is a more cost-effective (dominant) alternative than linezolid for the treatment of SSTI in patients that failed treatment with vancomycin.

PIN30

COST EFFECTIVENESS ANALYSIS OF THE COMBINATION EFAVIRENZ (EFV), TENOFOVIR (TDF) AND EMTRICITABINE (FTC) ONCE A DAY IN TREATMENT OF NAÏVE ADULT PATIENTS WITH HIV INFECTION IN MEXICO

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OBJECTIVES: To evaluate the cost effectiveness analysis of Efavirenz/Emtricitabine/Tenofovir ((TDF+FTC+EFV) in naïve patients with HIV from the public health system Mexican perspective. **METHODS:** A decision tree model was developed to estimate the efficacy and expected value of direct medical costs. Efficacy was measured by the percentage of individuals with plasma HIV RNA < 50 copies/mL and and < 400 copies/mL. at 96 weeks, based on a systematic review and meta-analysis of clinical trials of regimens in treatment-naïve populations. Model follows the recommendations of antiretroviral persons handling Guide with HIV in Mexico (2009 SSA). The direct costs and treatment of adverse events in the treatment of HIV were estimated. When the patient failure, the cost of new treatment was added. The unitary costs were obtained from the Mexican public health institutions. All costs were calculated in 2010 Mexican Pesos (MXP). Incremental-cost-effectiveness-ratios were expressed as cost per 1% of individuals with plasma HIV RNA < 50 copies/mL and and < 400 copies/mL Costs and outcomes were discounted at 5%. Probabilistic sensitivity analyses via Monte Carlo simulations were undertaken to incorporate likely distributional properties of key model. **RESULTS:** EFV+FTC+TDF was most effective than others comparators with probability of 0.734 (CI95%:0.601-0.835; n=514) -except when compare with TDF/FTC + ATV/r with efficacy of 0.743 CI95%:0.700-0.786; n=440- and 0.746 (0.686-0.798; n=232) of having <50 or <400 RNA copies/ml respectively at 96 weeks, EFV+FTC+TDF resulted as the alternative with less unitary average total cost ($60,026.00 MX and $60,122.00, respectively). TDF/FTC/EFV combination is a dominant option and cost saving compared to alternatives, except TDF/FTC + ATV/r (cost per 1% of individuals with plasma HIV RNA < 50 copies/mL of $8,490,581).Deterministic and probabilistic sensitivity analysis showed that the findings are robust. **CONCLUSIONS:** Efavirenz/Emtricitabine/Tenofovir is a cost effective drug on 96 weeks for the treatment of adult naïve patients with HIV infection in Mexico.

PIN31

COST-EFFECTIVENESS ANALYSIS OF DIFFERENT APPROACHES TO THE DIAGNOSIS AND TREATMENT OF INFLUENZA-LIKE ILLNESS IN HEALTHY ADULTS

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OBJECTIVES: This study predicted and analyzed outcomes among six options (universal antiviral therapy without testing [Universal], empiric therapy without testing [Empiric], empiric therapy with lab testing [Empiric_Lab], treatments responding to lab results [Standard], treatments responding to point-of-care testing [POCT] results and no treatment [NoTx]) in healthy adults with influenza-like symptoms who visit physicians within or beyond 48 hours of the onset of symptoms. **METHODS:** A decision model was created to predict total and direct medical costs, symptom-free days, quality of life and days of work lost within 14 days from the perspective of patients. Most model inputs were derived from the literature; some were obtained from internal data and expert opinions. Total costs (in $2009 USD) included costs associated with prescriptions/OTC, tests, complications, hospitalization and work-day loss. Cost-effectiveness analysis, cost-utility analysis and probabilistic sensitivity analysis were performed. **RESULTS:** Total costs per symptom-free day were $119 ($874/7.3), $130 ($893/6.9), $163 ($1,086/6.7), $162 ($1,103/6.8), $189 ($1,117/5.9) and $280 ($1117/4.2) for Universal, NoTx, Standard, POCT, Emiric_Lab and Empiric, respectively. Total costs per quality of life were $1,560 ($874/0.56), $1,641 ($893/0.54), $2,156 ($1,086/0.50), $1,949 ($1,103/0.57), $1,993 ($1,117/0.56) and $2,195 ($1117/0.54) for Universal, NoTx, Standard, POCT, Emiric_Lab and Empiric, respectively. Direct medical costs were $238, $169, $380, $336, $358 and $193 for Universal, NoTx, Standard, POCT, Emiric_Lab and Empiric, respectively. Direct medical costs per symptom-free day were $46, $25, $57, $49, $60 and $$46 for Universal, NoTx, Standard, POCT, Emiric_Lab and Empiric, respectively. Direct medical costs per quality of life were $425, $311, $755, $594, $639 and $$360 for Universal, NoTx, Standard, POCT, Emiric_Lab and Empiric, respectively. Sensitivity analysis indicated the study results were robust. **CONCLUSIONS:** With consideration of total costs, the universal option was the most cost-effective option. With consideration of direct medical costs only, no treatment is the most cost-effective option.

PIN32

PHARMACOECONOMIC ANALYSIS OF MARAVIROC IN TREATMENT-EXPERIENCED HIV PATIENTS IN BRAZIL

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OBJECTIVES: Antiretroviral combinations have been successful in delaying human immunodeficiency virus (HIV) progression; however, drug resistance may occur. Maraviroc and enfuvirtide are two drugs currently used in treatment-experienced HIV patients. The objective was to determine the economic impact of maraviroc versus enfuvirtide in HIV patients previously treated with conventional antiretrovirals. **METHODS:** A Markov model was developed to assess the economic consequences of the targeted therapies. The type of analysis was cost-minimization based on the premise of clinical equivalence. The clinical outcome used to support the clinical assumption was the odds ratio of decreasing >=1.0 log10 viral copies/ml over placebo. Targeted population was composed of adults infected with HIV virus (CCR5 co-receptor tropism), who underwent previous anti-HIV treatments and proved therapeutic failure. Model input data derived from a previously observed cohort of HIV patients in Brazil. A lifetime horizon was used. The economic perspective was that of the Brazilian Ministry of Health (MoH) as a payer and provider of medical services, treatments, and healthcare to its beneficiaries. Costs were expressed in 2010 Brazilian Currency (1BRL=0.59USD). Univariate and multivariate (Monte Carlo) analyses tested model robustness. **RESULTS:** An indirect comparison between the interventions showed that the effects of the drugs over placebo was similar from a clinical (odds ratios with approximate values) and statistical (overlapping confidence intervals) standpoints. Thus, clinical equivalence between the drugs was assumed. The economic analysis showed that the total cost of anti-HIV treatment per patient with maraviroc was approximately BRL17 thousand lower than enfuvirtide. Probabilistic sensitivity analysis reported 87% chance of having reduced treatment costs by choosing maraviroc over enfuvirtide. **CONCLUSIONS:** The use of maraviroc in treatment-experienced HIV patients showed to be beneficial for the Brazilian MoH in reducing the economic burden of the disease. The estimated annual budget impact ranged between BRL 8.0 to 10.5 million favorable to cost reduction.

PIN33

COST-UTILITY ANALYSIS OF RALTEGRAVIR IN HIV-INFECTED TREATMENT NAÏVE PATIENTS IN SWEDEN

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OBJECTIVES: Raltegravir, an integrase inhibitor of HIV-1, is approved for use in both treatment naïve and treatment experienced HIV-1 infected patients. In Sweden, raltegravir is reimbursed for patients with documented drug resistance and used predominately in heavily treated experienced patients. This study aims to investigate the cost-effectiveness of using raltegravir in treatment naïve patients versus using raltegravir as a salvage treatment. **METHODS:** A three-stage continuous-time Markov model representing successive HIV therapies was developed to predict the costs and quality-adjusted life years (QALYs) over a 50-year time horizon. Patients progressed to the next stage in the model as they failed or discontinued the current therapy for toxicity reasons. In each stage patients moved between 18 health states based on CD4 and HIV RNA levels. At anytime patients could die, suffer coronary heart disease or develop acquired immunodeficiency syndrome (AIDS). Initiation on a raltegravir-based regimen was evaluated versus initiation on a protease inhibitor (PI)-based regimen. During the second stage patients received a non-nucleoside reverse transcriptase inhibitor based regimen. Patients initiating on raltegravir progressing to the third stage received optimized salvage therapy (OT) whereas patients initiating on a PI received OT plus raltegravir. Data on effectiveness was gathered from randomized clinical trials and an HIV/AIDS database. Utilities and health care resource use were gathered from the literature and adapted to Swedish situation using expert opinion. **RESULTS:** Raltegravir-initiating treatment strategy offered longer undiscounted life expectancy compared to PI initiating strategy [20.51 vs. 18.60 years]. The incremental cost-utility ratio for using raltegravir in treatment naïve patients versus using raltegravir as a salvage treatment was 85 182 SEK per QALY ($12,564/QALY). Results were sensitive to analytical time horizon. **CONCLUSIONS:** Given the data and methods used, the model suggests that using raltegravir in treatment naïve patients compared to using raltegravir as a salvage therapy is cost-effective.

PIN34

INTRANASAL LIVE ATTENUATED (LAIV) VERSUS INJECTABLE INACTIVATED (TIV) INFLUENZA VACCINE FOR CHILDREN AND ADOLESCENTS: A CANADIAN COST EFFECTIVENESS ANALYSIS

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OBJECTIVES: Although influenza affects all age groups, influenza is common in children. Between 15% and 42% of preschool and school-aged children experience influenza each season. Recently, LAIV has been approved in Canada for use in